

10-11-00

A

Please type a plus sign (+) inside this box → ☐

PTO/SB/05 (4/98)
Approved for use through 09/30/2000. OMB 0651-0032
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))</i>	Attorney Docket No.	26530.18
	First Inventor or Application Identifier	Daniel Burton
	Title	System and Method for Sharing File Via A User Internet File System
	Express Mail Label No	EL417819563US

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents</i>	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
---	---

1. <input checked="" type="checkbox"/> * Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original and a duplicate for fee processing)</i> 2. <input checked="" type="checkbox"/> Specification [Total Pages 13] <i>(preferred arrangement set forth below)</i> - Descriptive title of the invention - Cross References to Related Applications - Statement Regarding Fed sponsored R & D - Reference to Microfiche Appendix - Background of the invention - Brief Summary of the invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure 3. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets 4] 4. Oath or Declaration [Total Pages <input]<br="" type="checkbox"/> a. <input checked="" type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 C.F.R. § 1.63(d)) <i>(for continuation/divisional with Box 16 completed)</i> i. <input type="checkbox"/> <u>DELETION OF INVENTOR(S)</u> Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).	5. <input type="checkbox"/> Microfiche Computer Program (Appendix) 6. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. <input type="checkbox"/> Computer Readable Copy b. <input type="checkbox"/> Paper Copy (identical to computer copy) c. <input type="checkbox"/> Statement verifying identity of above copies
---	---

*** NOTE FOR ITEMS 1 & 13. IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).**

ACCOMPANYING APPLICATION PARTS	
7. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s)) 8. <input type="checkbox"/> 37 C.F.R. § 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i> 9. <input type="checkbox"/> English Translation Document (if applicable) 10. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations 11. <input type="checkbox"/> Preliminary Amendment 12. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i> 13. <input type="checkbox"/> * Small Entity Statement(s) <input type="checkbox"/> Statement filed in prior application, Status still proper and desired (PTO/SB/09-12) 14. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) 15. <input checked="" type="checkbox"/> Other: Express Mail Certificate	

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No _____ / _____

Prior application information Examiner _____ Group / Art Unit _____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS					
<input type="checkbox"/> Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here)			or <input checked="" type="checkbox"/> Correspondence address below		
Name	David L. McCombs				
	Haynes and Boone, L.L.P.				
Address	901 Main Street, Suite 3100				
City	Dallas	State	Texas	Zip Code	75202-9918
Country	USA	Telephone	214-651-5533	Fax	214-651-5940

Name (Print/Type)	David L. McCombs	Registration No. (Attorney/Agent)	32,271
Signature	<i>[Signature]</i>	Date	10-10-00

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231

d624475.1

JC929 U.S. PTO
09/685238



10/10/00

09685238-101000

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision

TOTAL AMOUNT OF PAYMENT (\$1402.00)

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Daniel Burton
Examiner Name	
Group Art Unit	
Attorney Docket No.	26530.18

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to

Deposit
Account
NumberDeposit
Account
Name☐ Charge Any Additional Fee Required
Under 37 CFR 1.16 and 1.17☐ Applicant claims small entity status.
See 37 CFR 1.27

2. ☒ Payment Enclosed:

☒ Check ☐ Credit card ☐ Money
Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 710	201 355	Utility filing fee	710
106 320	206 160	Design filing fee	
107 490	207 245	Plant filing fee	
108 710	208 355	Reissue filing fee	
114 150	214 75	Provisional filing fee	

SUBTOTAL (1) (\$) 710

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
34	-20** = 14	18	252
Independent Claims 8	-3** = 5	80	400
Multiple Dependent			

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
103 18	203 9	Claims in excess of 20	
102 80	202 40	Independent claims in excess of 3	
104 270	204 135	Multiple dependent claim, if not paid	
109 80	209 40	** Reissue independent claims over original patent	
110 18	210 9	** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$) 1362

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES


Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for <i>ex parte</i> reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 390	216 195	Extension for reply within second month	
117 890	217 445	Extension for reply within third month	
118 1,390	218 695	Extension for reply within fourth month	
128 1,890	228 945	Extension for reply within fifth month	
119 310	219 155	Notice of Appeal	
120 310	220 155	Filing a brief in support of an appeal	
121 270	221 135	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,240	241 620	Petition to revive - unintentional	
142 1,240	242 620	Utility issue fee (or reissue)	
143 440	243 220	Design issue fee	
144 600	244 300	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	40
146 710	246 355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149 710	249 355	For each additional invention to be examined (37 CFR § 1.129(b))	
179 710	279 355	Request for Continued Examination (RCE)	
169 900	169 900	Request for expedited examination of a design application	

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 40

SUBMITTED BY

Name (Print/Type)	David L. McCombs	Registration No (Attorney/Agent)	32,271	Telephone	214 651-5533
Signature		Date	10-10-00		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement. This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Daniel Burton, et al.

Serial No.: N/A

Filed: Herewith

For: SYSTEM AND METHOD FOR
SHARING FILES VIA A USER
INTERNET FILE SYSTEM

§
§
§
§
§
§
§
§
§

Examiner: N/A

Group Art Unit: N/A



EXPRESS MAIL CERTIFICATE

Box Patent Application
Commissioner for Patents
Washington, D.C. 20231

Express Mail Number: EL417819563US

Date of Deposit: 10-10-00

I hereby certify that the following attached papers and fee:

1. Utility Patent Application Transmittal Sheet;
2. Fee Transmittal Sheet (in duplicate);
3. Copy of the Patent Application consisting of 13 pages of Specification, 6 pages of Claims and 1 page Abstract of Disclosure;
4. Four (4) Drawing sheets;
5. Copy of Declaration and Power of Attorney;
6. Assignment and Recordation Cover Sheet;
7. Information Disclosure Statement with copies of cited references;
8. Check in the amount of \$1402.00 (\$1362.00 for filing fee and \$40.00 for recordation of Assignment);
9. Express Mail Certificate; and
10. A Return Postcard

are being deposited with United States Postal Service "Express Mail Post Office to Addressee" to the Commissioner for Patents, Box Patent Application, Washington, D.C. 20231.

Gayle Conner

Typed or Printed Name

Gayle Conner

Signature

**SYSTEM AND METHOD FOR SHARING FILES VIA A USER INTERNET FILE
SYSTEM**

Inventors: Daniel Burton
2441 Ranch Road
Eagle Mountain, Utah 84043
Citizen of The United States of America

David Mitchell
357 West 205 North
Orem, Utah 84057
Citizen of The United States of America

Assignee: Novell, Inc.
122 East 1700 South
Provo, Utah 84606

HAYNES AND BOONE, L.L.P.
3100 Nations Bank Plaza
901 Main Street
Dallas, Texas 75202-3789
(214) 651-5000

00000000-101000

EXPRESS MAIL NO.: EL417819563US DATE OF DEPOSIT: 10-10-00

This paper and fee are being deposited with the U.S. Postal Service Express Mail Post Office to Addressee service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

Gayle Conner
Name of person mailing paper and fee

Gayle Conner
Signature of person mailing paper and fee

SYSTEM AND METHOD FOR SHARING FILES VIA A USER INTERNET FILE SYSTEM

Background

The present disclosure relates to file sharing and, more particularly, to a system and method for sharing files via an Internet file system.

Various file sharing protocols have been proposed. One such proposal includes the Common Internet File System (CIFS). The CIFS is intended to provide an open cross-platform mechanism for client systems to request file services from server systems over a network. Further, the CIFS is based on the standard Server Message Block protocol widely in use by personal computers and workstations running a variety of operating systems.

Another protocol is the Secure Shell (SSH) which is program to log into another computer over a network, to execute commands in a remote machine, and to move files from one machine to another

Use of the Internet and the World Wide Web has been characterized by read-only access. Existing protocols such as FTP are good solutions for two-way file transfers.

However, new read/write interfaces will become increasingly necessary as the Internet becomes more interactive and collaborative. Adoption of a common file sharing protocol for the Internet having modern semantics such as shared files, byte-range locking,

coherent caching, change notification, and replicated storage, would provide important benefits to the Internet community.

Conventional file sharing services have been implemented that address some of the issues described above. In such conventional services, an Internet or Web based file server is available for Internet users to store, share, manage and publish files from their Web browser and access them from their or any other Web browser. As such, users can stay connected to their information from anywhere in the world. User files are securely stored on a network and may be shared with any colleague of the users choosing. Most file sharing services support all file types and require no additional software on the desktop making the services an extension of the desktop and a fast and easy way to share and distribute files and content on the Web.

A limitation of the conventional file sharing services is that copying files to and from an Internet file system is difficult and cumbersome. For example, most file upload systems require a special interface that users must become accustomed to, whether that interface is browser based or a special client application. A Web-based Distributed Authoring and Versioning (WebDAV) set of extensions to the Hyper Text Transfer Protocol (HTTP), however, allows users to collaboratively edit and manage files on remote web servers. Since DAV works over HTTP, all the benefits of HTTP are realized that FTP cannot provide. Such benefits include: strong authentication, encryption, proxy support, and caching. Although it is true that SSH does provide some of this functionality, the HTTP infrastructure is much more widely deployed than SSH. Further, SSH does not have the wide complement of tools, development libraries, and applications that HTTP does.

The protocols which use the services mentioned above typically use databases to store information about users and the rights of those users to certain files in a system. As such, anytime a user attempts to access a particular file, a database check will be made to determine if the user has rights to that file. Constantly using a database to allow file sharing between users can become a cumbersome exercise.

Therefore, what is needed, is an application that makes an Internet file system behave in a similar manner as a local or network file system and that administers rights for files in the file system. Also, a directory is used for user account information. Also,

communities of users may be configured to allow the users to easily share folders and files containing information of common interests.

Summary

5 In response to these limitations, a system and method for sharing files via an Internet file system is presented. In such a system, the Internet is treated as an extension of the users own file system where access rights are stored.

10 In one embodiment, an internet file system is configured when a user accesses a server that is configured with an application that creates the internet file system for the user. A directory stores a home folder of the user, where folders and files in the home folder are available at a root of the internet file system. The application provides a first folder and a second folder in a root of the home folder. The first folder contains folders that represent folders and files that have been shared with the user, and the second folder contains objects of the user and communities that are of interest to the user. The application further creates an auxiliary class containing a first attribute, a second attribute, and a third attribute. The first attribute is used to quickly find other users that the folders and the files in the home folder have been shared with, the second attribute is used to store names of the other users and a path of the folders and the files that have been shared with the user, and the third attribute is used to allow the user and other users with common interests to share folders and files of the common interest.

20 In another attribute, a first user shares a file with a second user. An application adds the first user to a third attribute of the second user and adds the second user to a third attribute of the first user. The application further adds a path of the shared file and a user name of the second user to a first attribute of the first user and adds the path of the shared file and a user name of the first user to a second attribute of the second user. The application makes the first attribute available through a folder of the second attribute, where the folder belongs to the second user.

25 In a further attribute, user objects are created in a directory when, if a user shares a folder with another user who is not registered with an application in the directory, a temporary user object is created with an email address as the name of the other user. The other user submits a registration form and a script determines if the email address

30

corresponds with the another user. If it does, the temporary user object is updated based on information provided in the registration form.

Brief Description of the Drawings

Fig. 1 depicts a diagrammatic view of a network and user internet file system of the present disclosure.

Fig. 2 depicts a diagrammatic view of sharing files and/or folders in a directory of the network of the present invention.

Fig. 3 depicts a diagrammatic view of creating users and communities in an application container of the directory of the present invention.

Fig. 4 depicts a computer of the present invention.

Detailed Description

Fig. 1 depicts a network 10 that includes a local network 16 which is accessed by a WebDAV enabled application (or browser) 12 via the Internet (or data network) 14. The local network 16 includes a server 18 that comprises an application 20 for creating an Internet file system 26 that a user can access, a file system 22, and a directory 24 which may be a Lightweight Directory Access Protocol (LDAP) directory. The directory 24 includes a user's home folder 28 (which is an attribute of the user object), a WebDAVUser auxiliary class 30 and communities 38 (the group objects are an embodiment of the communities). The directory may be a Lightweight Directory Access Protocol based directory. The root of the Internet file system 26 is roughly equivalent to the user's home folder 28. The files and folders in the user's home folder 28 are available at the root of the user's Internet file system 26. The application 20 also provides two special folders in the root of the user's Internet file system. These are the Received Folders folder 40 (i.e. the first folder), and the Friends folder 42 (i.e. the second folder). The actual name of these folders is configurable. Files in the user's Internet file system 26 are stored on the file system 22, with additional folders and shared files being stored in the directory 24 using the WebDAV user auxiliary class 30. An example of the directory 24 is Novell's eDirectory.

The Received Folders folder 40 contains folders that represent files and folders that have been shared with the user. For each user that has shared files or folders, there is a folder that includes the name of each user and the files or folders that have been shared. Also there are folders for each community that the user is a member of and in the community folder, there are folders for the other users that are in the community. This folder includes the files and folders that have been shared with the community.

The Friends folder 42 contains the user's objects and community folders that are of interest to the user. Anytime a folder is shared with another user, user objects are added to the Friends folder 42 for both the user sharing the folder and the user receiving the folder (i.e. the another user). This creates a repository of user objects and eliminates the need for performing a search in the directory 24 to find a user that someone may want to share files or folders with. The application 20 creates the WebDAVUser auxiliary class 30. The WebDAVUser is attached to a user object 27 when files are shared with that user, or when that user shares files with another user.

Included in the User Internet file system 26 are Communities 44 which are collections of users with a common interest. Files and folders can be shared between the user and other users or with the whole community. Communities 38 are stored as groups in the directory 24 and the users are members of the group.

The application 20 also creates an auxiliary class 30 for the user of the application. The auxiliary class contains three attributes: Shared Paths 32, Received Paths 34, and Friends 36.

The Shared Paths attribute 32 is used to quickly find which users a file or folder has been shared with. This enables a user to modify the rights granted or to remove the sharing of the file or folder. The Received Paths attribute 34 is used to store the names of users and the path of the file or folder that have been shared with the user. The Received Folder 40 is populated using the information stored in this attribute.

Fig. 2 depicts the sharing of files and/or folders in the directory 24. If User A shares a file with User B 52, the application 20 adds User A to User B's Friends attribute 54, then adds User B to User A's Friends attribute 50. This puts the user objects 27 into the Friends folder 42 of the Internet file system 26, making the user objects readily available for future sharing.

The application 20 further adds the Path:User B key-value pair to User A's Shared Paths attribute 32 and adds the User A: Path key-value pair to User B's Received Paths attribute 56. The shared path via the network file system 22 will now be available through User B's Received Paths folder such as folder 40.

5 If User A 50 modifies rights to the shared path, the application 20 looks at the Shared Paths attribute 32 for User A to determine who the folder has been shared with and looks at the file system's Access Control Lists (ACLs) to determine what rights each user has been granted. The ACL is a list of users and the rights they have to a file. In a preferred embodiment, the ACLs that are used are built into the file system, where as the
10 typical Internet file sharing system would need to store these ACLs in a database. As such, the ACLs described above determine what access rights User B has to the file shared by User A. When User A modifies the access rights, the application 20 modifies the ACLs. A mail message is then generated that sends notification to User B 52 that a file has been shared with him.

15 Fig. 3 depicts the creating of users and communities in the directory 24. The application 20 provides a system for creating new user objects in a directory container 68 which is similar to a folder in a file system as it can contain objects and other containers. If an un-authenticated user enters a web site to access the application 20, the user is presented with a home page 60 that contains a link to a sign up page 62 and to a login
20 page 64. If the user is authenticated, he/she is taken straight to the root of their file system 22. The Sign up page 62 presents a form 62a (such as an HTML form) that receives information regarding the user such as: User name, Password, E-mail address, First Name, Last Name, Address, and Interests (such as Golf, Photography, and Skiing).

25 If a user shares a folder with another user who is not registered with the application 20, a temporary user object is created with the e-mail address as the name of the another user. When the sign up form is submitted, an ASP script 66 checks to see if the e-mail address entered corresponds with the temporary user. If it does, the user object is updated based on the new information provided. If there is no corresponding user object a new user object 70 is created with the information provided.

30 The ASP script 66 then looks at the Interests 62b that the user has entered. Each interest is associated with a Group object 72 in the application container 68 of the

directory 24. For each interest the user denotes, the user is added as a member of that group. The groups that the user is associated with are then added to the users list of friends 42.

Fig. 4 depicts a computer 80 that includes a processor 82 that is operably coupled to memory 84. The computer 80 may be a personal computer, laptop, server, mobile phone, digital device, and/or any device that can send and/or receive information related to file sharing. The processor 82 may be a central processing unit, digital signal processor, microprocessor, microcontroller, microcomputer, and/or any device that manipulates digital information based on programming instructions. The memory 84 may be read-only memory, random access memory, flash memory and/or any device that stores digital information. The memory 84 is coupled to the processor 82 and stores a computer program (or software application) comprising instructions that, when executed on the computer (or read by the processor), causes the processor to perform the actions described in Fig.'s 1-3 above.

The present disclosure thus enjoys several advantages. For example, a file system and directory are used in combination to allow an application that makes an Internet file system behave in a similar manner as a local or network file system. The application further administers rights for files in the file system and the directory is used for user account information. Also, communities of users may be configured to allow the users to easily share folders and files containing information of common interests.

It is understood that variations may be made in the foregoing without departing from the scope of the present invention. For example, the application 20 may reside on any digital device (such as a mobile phone) and be used in any network (such as a wireless network). It is further understood that other modifications, changes and substitutions are intended in the foregoing disclosure and in some instances some features of the disclosure will be employed without corresponding use of other features. Additionally, singular discussion of items and/or computers located in the network 10 is also meant to apply to situations where items and/or computers exist. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the scope of the disclosure.

Claims

5 WHAT IS CLAIMED IS:

1. A method for configuring an internet file system, the method comprising:
accessing, by a user, a server that is configured with an application;
creating, by the application, an internet file system for the user;

10 storing, by a directory, a home folder of the user, wherein folders and files in the
home folder are available at a root of the internet file system;

providing, by the application, a first folder and a second folder in a root of the
home folder, the first folder containing folders that represent folders and files that have
been shared with the user, and the second folder containing objects of the user and
15 communities that are of interest to the user; and

creating, by the application, an auxiliary class containing a first attribute, a second
attribute, and a third attribute, wherein the first attribute is used to quickly find other
users that the folders and the files in the home folder have been shared with, the second
attribute is used to store names of the other users and a path of the folders and the files
20 that have been shared with the user, and the third attribute is used to allow the user and
other users with common interests to share folders and files of the common interest.

2. The method of claim 1 further comprising accessing, by the user, the
internet file system.

25

3. The method of claim 1 further comprising attaching the auxiliary class to a
user object when the folders and the files are shared with the user.

4. The method of claim 1 further comprising enabling the user to modify
30 granted rights to the shared folders and the shared files.

5. The method of claim 1 further comprising enabling the user to disallow the sharing of the folders and the files.

6. The method of claim 1 further comprising populating the first folder with the stored names of the other users and the path of the folders and the files that have been shared with the user.

7. The method of claim 1 further comprising creating communities of users with common interests, wherein the communities are stored as groups in the directory and the users are members of the groups.

8. A method for file sharing, the method comprising:
sharing, by a first user, a file with a second user;
adding, by an application, the first user to a third attribute of the second user;
adding, by the application, the second user to a third attribute of the first user;
adding, by the application, a path of the shared file and a user name of the second user to a first attribute of the first user;
adding, by the application, the path of the shared file and a user name of the first user to a second attribute of the second user; and
making available, by the application, the first attribute through a folder of the second attribute, wherein the folder belongs to the second user.

9. The method of claim 8 further comprising, if the first user modifies rights to the first attribute, determining by the application which user the folder has been shared with and what rights the user has been granted.

10. The method of claim 8 further comprising notifying the second user, by the application, that the file has been shared with the second user.

11. The method of claim 8 further comprising placing, by the application, objects of the first user and the second user into a folder of the attribute that is located in an internet file system of the first user and in an internet file system of the second user.

5 12. The method of claim 11 further comprising sharing the objects by the first user and the second user.

13. The method of claim 8 wherein the first attribute is a shared path attribute.

10 14. The method of claim 8 wherein the second attribute is a received path attribute.

15. The method of claim 8 wherein the third attribute is a friend attribute.

15 16. The method of claim 8 wherein the first attribute, the second attribute, and the third attribute are located in a directory.

17. The method of claim 8 wherein the first user has a second attribute and the second user has a first attribute.

20 18. A method for creating user objects in a directory, the method comprising:
if a user shares a folder with another user who is not registered with an application in the directory, creating a temporary user object with an email address as a name of the another user;

25 submitting, by the another user, a registration form;
determining, by a script, if the email address corresponds with the another user;
and

if the email address corresponds with the another user, updating the temporary user object based on information provided in the registration form.

19. The method of claim 18 further comprising, if there is no corresponding user object, creating a new user object based on the information provided.

20. The method of claim 18 further comprising monitoring, by the script,
5 interests the another user has submitted in the registration form.

21. The method of claim 20 further comprising associating each interest of the another user with a group object in a container of the application.

10 22. The method of claim 21 further comprising adding the another user as a member of each interest group.

23. The method of claim 22 further comprising adding the each interest group to a list of friends of the another user.

15 24. The method of claim 18 wherein the information includes at least one item from a group consisting of:

the email address;

a user name;

20 a password;

a first name;

a last name;

an address; and

interests.

25 25. A system for configuring an internet file system, the system comprises:
a server configured with an application, wherein a user accesses the application
and the application creates an internet file system for the user; and

a directory that stores a home folder of the user, wherein folders and files in the
30 home folder are available at a root of the internet file system, wherein the application

further provides a plurality of folders in a root of the home folder, and wherein the application further creates an auxiliary class containing a plurality of attributes.

26. The system of claim 25 wherein the plurality of folders includes a first
5 folder containing folders that represent folders and files that have been shared with the user, and a second folder containing objects of the user and communities that are of interest to the user.

27. The system of claim 25 wherein the plurality of attributes includes a first
10 attribute used to quickly find other users that the folders and the files in the home folder have been shared with, a second attribute used to store names of the other users and a path of the folders and the files that have been shared with the user, and a third attribute used to allow the user and other users with common interests to share folders and files of the common interest.

15 28. A system for file sharing, the system comprises:
means for sharing, by a first user, a file with a second user;
means for adding, by an application, the first user to a third attribute of the second user;
20 means for adding, by the application, the second user to a third attribute of the first user;
a means for adding, by the application, a path of the shared file and a user name of the second user to a first attribute of the first user;
means for adding, by the application, the path of the shared file and a user name
25 of the first user to a second attribute of the second user; and
means for making available, by the application, the first attribute through a folder of the second attribute, wherein the folder belongs to the second user.

29. A user internet file system comprises:

a received folder that contains folders representing files and folders that have been shared with a user and the names of those who shared the files and folders with the user; and

5 a friends folder that contains the user's objects and community folders that contain information that are of interest to the user.

30. The file system of claim 29 further comprises a root similar to a home folder of the user.

10 31. The file system of claim 30 wherein files and folders in the home folder are available at the root of the file system.

32. A directory comprises:

15 a user object;

a home folder of the user, wherein the home folder is an attribute of the user object;

an auxiliary class attached to the user object when files are shared with the user;

a community folder that includes topics of interest to the user; and

20 a group object associated with each topic of interest.

33. The directory of claim 32 wherein the auxiliary class is attached to the user object when the user shares files with other users.

25 34. A software application executable on a computer, the application comprising:

creating a user internet file system;

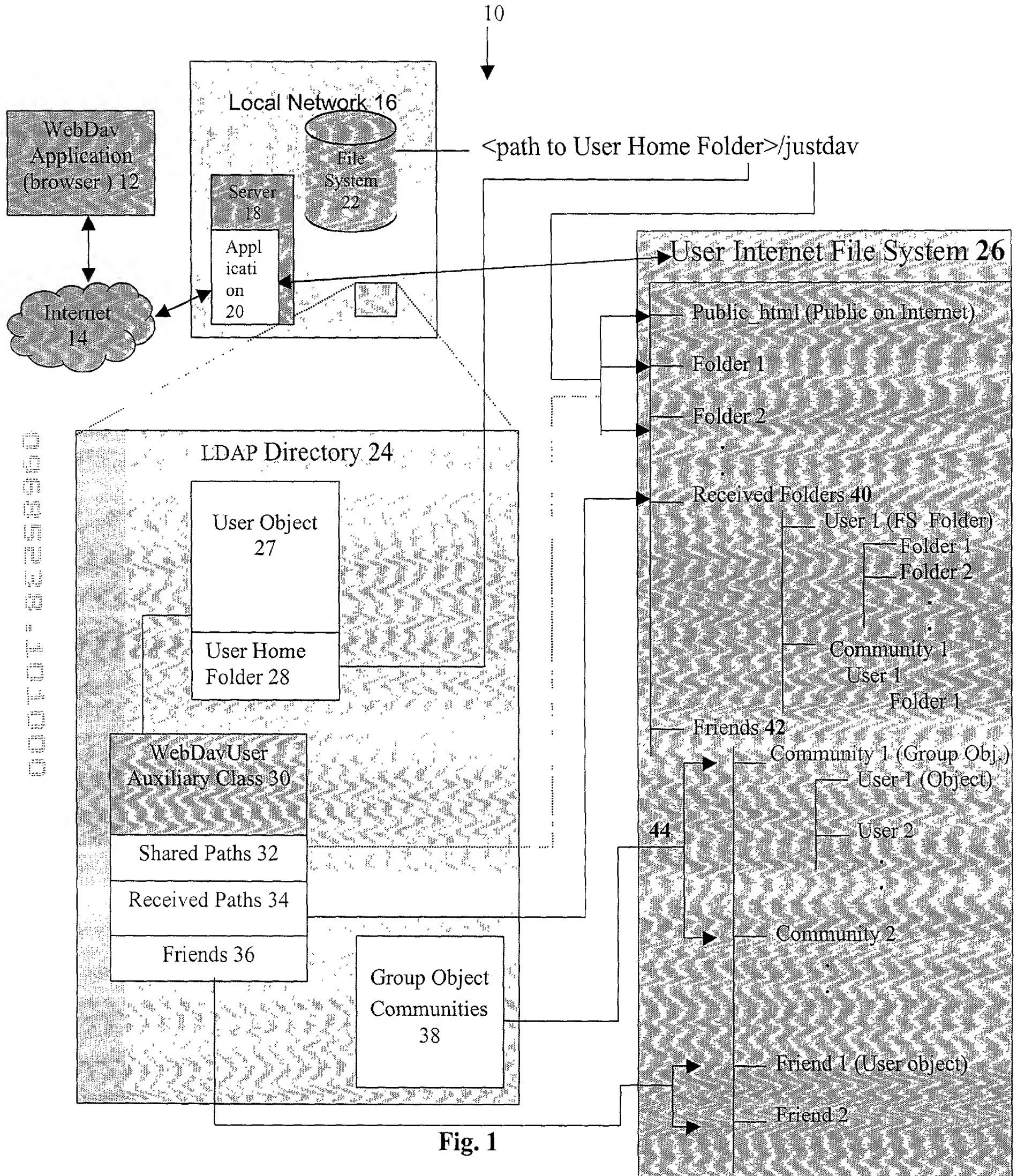
providing files in a root of a user's home folder; and

30 creating an auxiliary class attached to an object of the user if the files are shared via the internet file system.

Abstract

**SYSTEM AND METHOD FOR SHARING FILES VIA A USER INTERNET FILE
SYSTEM**

A system and method for sharing files via an Internet file system is presented. In one embodiment, an internet file system is configured when a user accesses a server that is configured with an application that creates the internet file system for the user. A directory stores a home folder of the user, where folders and files in the home folder are available at a root of the internet file system. The application provides a first folder and a second folder in a root of the home folder. The first folder contains folders that represent folders and files that have been shared with the user, and the second folder contains objects of the user and communities that are of interest to the user. The application further creates an auxiliary class containing a first attribute, a second attribute, and a third attribute. The first attribute is used to quickly find other users that the folders and the files in the home folder have been shared with, the second attribute is used to store names of the other users and a path of the folders and the files that have been shared with the user, and the third attribute is used to allow the user and other users with common interests to share folders and files of the common interest.



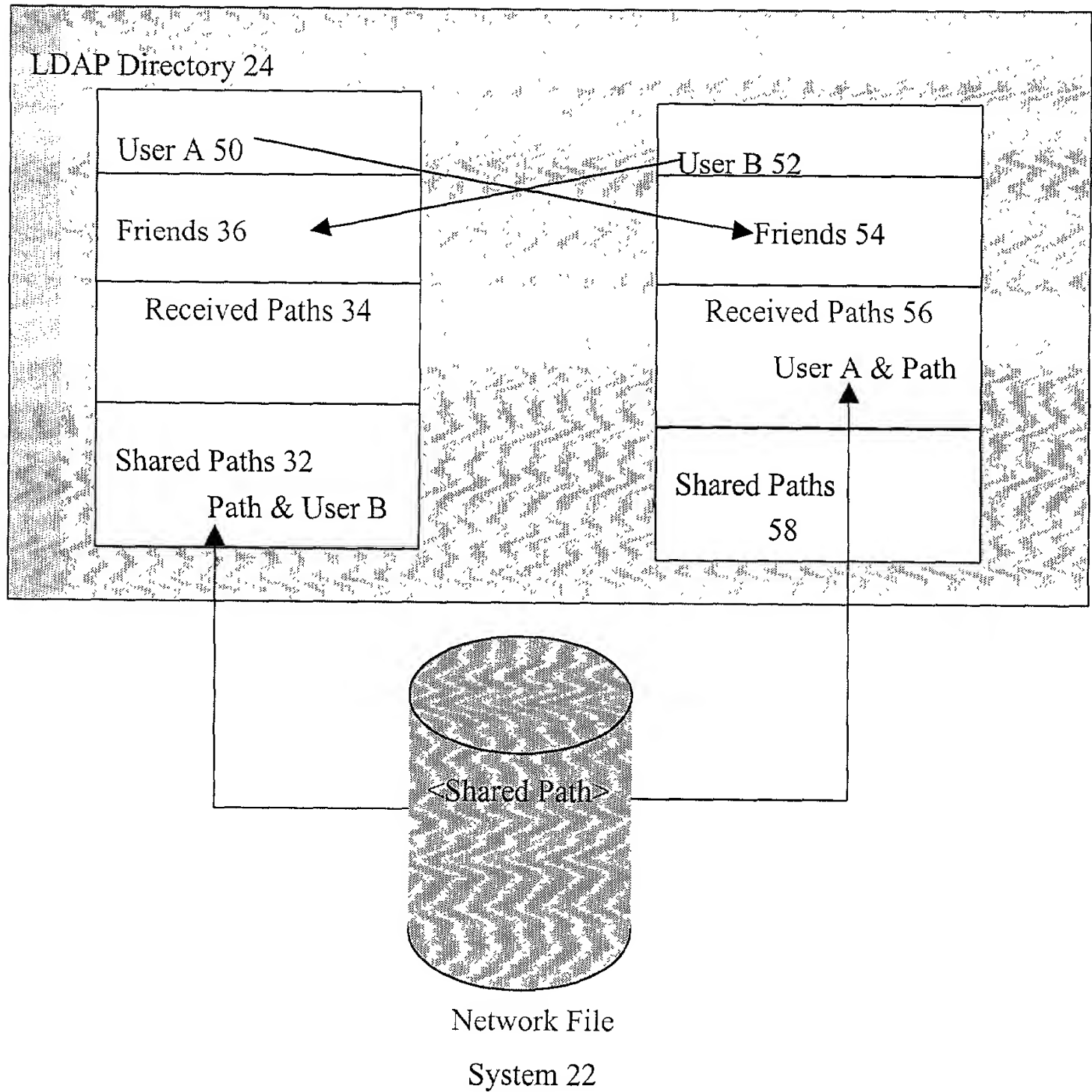


Fig. 2

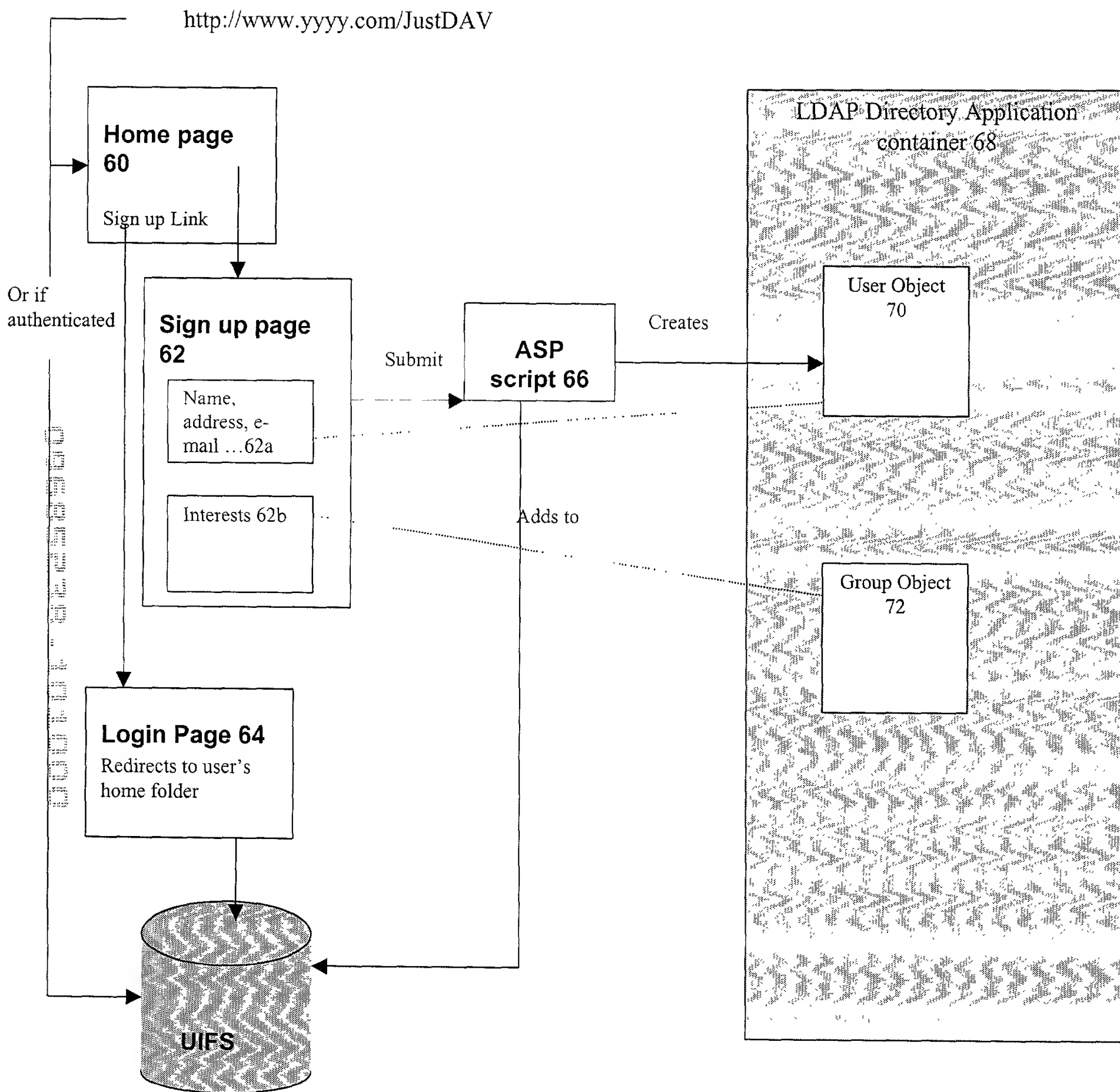


Fig. 3

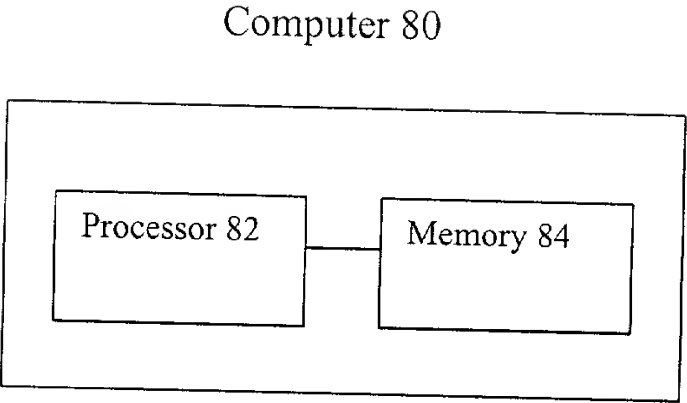


Fig. 4

DOCKET NO.: 26530.18

DECLARATION AND POWER OF ATTORNEY FOR
PATENT APPLICATION

As below named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below next to our names;

We believe we are the original, first and sole joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD FOR SHARING FILES VIA A
USER INTERFACED FILE SYSTEM

the specification of which: (check one)

XX is attached hereto.

_____ was filed on _____
under Attorney's Docket Number _____
as Application Serial No. _____
and was amended on _____ (if applicable).

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 CFR 1.56.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DOCKET NO.: 26530.18

POWER OF ATTORNEY: As a named inventor, we hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Theodore Baroody	Reg. No. 45,417	Christopher R. Kosh	Reg. No. 42,760
Jeffrey M. Becker	Reg. No. 35,442	Michael J. Balconi-Lamica	Reg. No. 34,291
James R. Bell	Reg. No. 26,528	Todd Mattingly	Reg. No. 40,298
Daniel E. Burke	Reg. No. 46,588		
Michael S. Bush	Reg. No. 31,745	David L. McCombs	Reg. No. 32,271
L. Howard Chen	Reg. No. 46,615	John W. Montgomery	Reg. No. 31,124
Randall E. Colson	Reg. No. 40,566	Bill R. Naifeh	Reg. No. 44,962
Michael A. Davis, Jr.	Reg. No. 35,488	David M. O'Dell	Reg. No. 42,044
Ruben C. DeLeon	Reg. No. 37,812	Phillip B. Philbin	Reg. No. 35,979
Timothy Headley	Reg. No. 31,765	Constance M. Pielech	Reg. No. 46,991
Brian J. Hubbard	Reg. No. 45,873	Brandi W. Surfatis	Reg. No. 37,713
Rita M. Irani	Reg. No. 31,028	David O. Simmons	Reg. No. 43,124
Warren B. Kice	Reg. No. 22,732		

Send correspondence to David L. McCombs, Haynes and Boone, L.L.P., 901 Main Street, Suite 3100, Dallas, Texas 75202-3789 and direct all telephone calls to 214 651-5533.

Full Name of First Inventor: Daniel Burton

Inventor's Signature: *Daniel Burton* Dated: 9 Oct 2000

Residence: 2441 Ranch Road, Eagle Mountain, Utah 84043

Citizenship: U.S.A.

Post Office Address: 2441 Ranch Road, Eagle Mountain, Utah 84043

Full Name of Second Inventor: David Mitchell

Inventor's Signature: _____ Dated: _____

Residence: 357 West 205 North, Orem, Utah 84057

Citizenship: U.S.A.

Post Office Address: 357 West 205 North, Orem, Utah 84057

LINOVEL-3.WPD

DOCKET NO.: 26530.18

POWER OF ATTORNEY: As a named inventor, we hereby appoint the following attorneys or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Theodore Baroody	Reg. No. 45,417	Christopher R. Kosh	Reg. No. 42,760
Jeffrey M. Becker	Reg. No. 35,442	Michael J. Balconi-Lamica	Reg. No. 34,291
James R. Bell	Reg. No. 26,528	Todd Mattingly	Reg. No.
Daniel E. Burke	Reg. No. 46,588		40,298
Michael S. Bush	Reg. No. 31,745	David L. McCombs	Reg. No. 32,271
L. Howard Chen	Reg. No. 46,615	John W. Montgomery	Reg. No. 31,124
Randall E. Colson	Reg. No. 40,566	Bill R. Naifeh	Reg. No. 44,962
Michael A. Davis, Jr.	Reg. No. 35,488	David M. O'Tell	Reg. No. 42,044
Ruben C. DeLeon	Reg. No. 37,812	Phillip B. Philbin	Reg. No. 35,979
Timothy Headley	Reg. No. 31,765	Constance M. Pielech	Reg. No. 46,991
Brian J. Hubbard	Reg. No. 45,873	Brandi W. Sarfatis	Reg. No. 37,713
Rita M. Irani	Reg. No. 31,028	David O. Simons	Reg. No. 43,124
Warren B. Kice	Reg. No.		
	22,732		

Send correspondence to David L. McCombs, Haynes and Boone, L.L.P., 901 Main Street, Suite 3100, Dallas, Texas 75202-3789 and direct all telephone calls to 214 651-5533.

Full Name of First Inventor: Daniel Burton

Inventor's Signature: _____ Dated: _____

Residence: 2441 Ranch Road, Eagle Mountain, Utah 84043

Citizenship: U.S.A.

Post Office Address: 2441 Ranch Road, Eagle Mountain, Utah 84043

Full Name of Second Inventor: David Mitchell

Inventor's Signature: David Mitchell Dated: 10/6/2000

Residence: 357 West 205 North, Orem, Utah 84057

Citizenship: U.S.A.

Post Office Address: 357 West 205 North, Orem, Utah 84057

NOVELL-1.WPD